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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/753,300

12/29/2000

Tommi Ylamurto

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7856

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7590

10/17/2005

ROBERT C. ROLNIK
NOKIA INC.
6000 CONNECTION DRIVE
MD 1-4-755
IRVING, TX 75039

EXAMINER

CORRIELUS, JEAN B

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/753,300

Applicant(s)

YLAMURTO, TOMMI

Examiner

Jean B Corielus

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-7 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings were received on 9/1/05. These drawings are acceptable.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art fig. 1 in view of Dent US Patent No. 5,351,016.

Applicant's admitted prior art fig. 1 discloses a method and apparatus comprising generating a first quadrature data symbol ; generating a second quadrature data symbol; generating a first in-phase data symbol and second in-phase data symbol see lines 65-68. However, Applicant's admitted prior art does not teach the first and second quadrature data symbol, the first and the second inphases data signals are compensated using based on the alpha, epsilon and gain, respectively. In the same field of endeavor, Dent teaches compensating Q and I channels using A (gain), T (alpha) and K (Epsilon). See fig. 3 and col. 7, line 61-col. 8, line 12. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in

Applicant's prior art fig. 1, so as to continually and interactively adjust and compensate for mutable modulation inaccuracy and errors as taught by Dent see col. 5, lines 60-62.

Allowable Subject Matter

4. Claims 2-7 are allowed.

Response to Arguments

5. Applicant's arguments filed 9/1/05 have been fully considered but they are not persuasive. It is alleged that the coefficients for predistortion and the signals being distorted in Dent and in the invention are different. However it is noted that such differences are not clearly identified in the claim. It is further alleged that the coefficients of the present invention have different physical meaning from coefficients of Dent. However, the intended meaning of the comment of "different physical meaning" is not clear. It is further alleged that the location of **predistortion unit** in the transmitter is different than the teaching of Dent. However such limitation is not claimed. For the sake of argument, Given the disclosure of the prior art that teaches the generation of a plurality of inphase and quadrature signals and the disclosure of Dent that teaches that inphase and quadrature signals must be compensated for imbalance, one skill in the art would have been motivated to compensate for inphase and quadrature imbalance at the output of mapping device 103 of the prior art since the device 103 of the prior art generates a plurality of inphase and quadrature signals that can be subject to great imbalance. The argument about lack of disclosure by Dent of an IFFT block is moot since the base reference, the admitted prior art figure 1, teaches the IFFT component.

Examiner agrees with applicant's comment made at page 6, line 12, that **"Dent's method may be used with any system"**, and that explains why the system of Dent is so versatile and can be well adapted to be used in the admitted prior art fig. 1, for the reasons provided by Dent.

Conclusion


6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Cornelius
Primary Examiner
Art Unit 2637

10-15-05